

Patent Claims

What is claimed is:

1. A plasma display device, comprising:
5 a plasma display panel; and
 a heat-dissipating plate, mounted on the plasma display panel and thermally connected to the plasma display panel through a laminar attachment structure;
wherein the laminar attachment structure comprises an annular channel
10 which divides the laminar attachment structure into an outer closed portion and an inner portion and communicates with the external environment through at least one vacuum-pumping aperture formed at the heat-dissipating plate.
2. The plasma display device of claim 1, wherein the laminar
15 attachment structure is a thermal pad.
3. The plasma display device of claim 1, wherein the laminar attachment structure is an adhesive double tape.
- 20 4. The plasma display device of claim 1, wherein the inner portion of the laminar attachment structure comprises at least one trench which divides the inner portion into at least two separated regions.

5. The plasma display device of claim 1, wherein the at least one vacuum-pumping aperture is disposed above the annular channel.

6. The plasma display device of claim 4, wherein the at least one
5 trench of the inner portion of the laminar attachment structure communicates with the external environment through at least one vacuum-pumping aperture formed at the heat-dissipating plate.

7. A method for attaching a heat-dissipating plate onto a plasma
10 display panel, comprising:

attaching one face of a laminar attachment structure onto the plasma display panel; wherein the laminar attachment structure comprises an outer closed portion and a plurality of sheet portions spaced apart from each other within the closed portion;

15 forming apertures at the heat-dissipating plate corresponding to the spaces of the plurality of sheet portions for vacuum pumping; and
instantaneously drawing out the air within the closed portion through the apertures simultaneously when the heat-dissipating plate is attached onto the other face of the laminar attachment structure, thereby tightly attaching
20 the heat-dissipating plate onto the plasma display panel.

8. The method of claim 7, wherein the laminar attachment structure is a thermal pad.

9. The method of claim 7, wherein the laminar attachment structure is an adhesive double tape.

10. A plasma display device, comprising:
5 a plasma display panel; and
a heat-dissipating plate, mounted on the plasma display panel and thermally connected to the plasma display panel through a laminar attachment structure having a plurality of strips spaced apart from each other;
wherein a respective guide trench is disposed between each pair of
10 the neighboring strips to guide out the air within the spaces of the plurality of strips.

11. The plasma display device of claim 10, wherein the two ends of the guide trench are sealed to form a closed region which
15 communicates with the external environment through at least one vacuum-pumping aperture formed at the heat-dissipating plate.

12. The plasma display device of claim 11, wherein the space is about 3-20 mm.

20 13. The plasma display device of claim 10, wherein the laminar attachment structure is a thermal pad.

14. The plasma display device of claim 10, wherein the laminar attachment structure is an adhesive double tape.